We Claim:

1. A phytosterol and/or a phytostanol ester compound produced from a reaction of a phytosterol and/or a phytostanol with a polyunsaturated fatty acid, wherein the polyunsaturated fatty acid has from 18 to 22 carbon atoms and at least three carbon-carbon double bonds.

2. A compound according to claim 1 wherein the phytosterol is selected from the group consisting of beta-sitosterol, stigmasterol, campesterol, and mixtures thereof.

3. A compound according to claim 2 wherein the phytosterol is selected from the group consisting of beta-sitosterol, stigmasterol, and mixtures thereof.

4. A compound according to claim 3 wherein the phytosterol is beta-sitosterol.

5. A compound according to claim 1 wherein the phytostanol is selected from the group consisting of campestanol, beta-sitostanol, and mixtures thereof.

6. A compound according to claim 5 wherein the phytostanol is beta-sitostanol.

7. A compound according to claim 1 wherein the polyunsaturated fatty acid is eicosapentaenoic acid or docosahexaenoic acid.

8. A composition comprising a compound according to claim 1 in admixture with another ester of a phytosterol and/or a phytostanol optionally also in admixture with a free phytosterol, a free phytostanol, and/or PUFA glycerides or esters, said another ester of a phytosterol and/or a phytostanol being the product of the esterification reaction between a phytosterol and/or a phytostanol and a fatty acid having less than 18 or more than 22 carbon atoms and at least three carbon-carbon double bonds and/or a fatty acid having from 18 to 22 carbon atoms and less than three carbon-carbon double bonds.

9. A composition for lowering serum cholesterol and triglyceride levels in a mammal comprising a pharmaceutically acceptable carrier in combination with an effective amount of phytosterol and/or a phytostanol ester compound produced from a reaction of a phytosterol and/or a phytostanol with a polyunsaturated fatty acid having from 18 to 22 carbon atoms and at least three carbon-carbon double bonds.

10. A composition according to claim 9 wherein the pharmaceutically acceptable carrier and phytosterol and/or phytostanol ester compound are formed into a unit dosage form.

11. A composition according to claim 10 wherein the unit dosage form is selected from the group consisting of capsules, powders, liquids, gels, and tablets.

12. A composition according to claim 10 wherein the composition is a dietary supplement or a food ingredient.

13. A composition according to claim 10 wherein the mammal is a human.

14. A process for lowering serum cholesterol and triglyceride levels in a mammal comprising administering to the mammal an effective amount of the compound of claim 1 in combination with a pharmaceutically acceptable carrier.

15. A process for preparing a phytosterol and/or a phytostanol ester compound comprising esterifying a free phytosterol, a phytostanol or a mixture thereof with a n-3 polyunsaturated fatty acid having from 18 to 22 carbon atoms and at least three carbon-carbon double bonds.

16. A process for preparing a phytosterol and/or a phytostanol ester compound comprising:

(a) mixing, in the absence of a solvent, a free phytosterol and/or a phytostanol, an ester of a n-3 polyunsaturated fatty acid (PUFA), and an interesterification catalyst to form a reaction mixture; and

(b) heating the reaction mixture to obtain interesterification of the phytosterol and/or the phytostanol with the ester of the n-3 PUFA.

17. A process according to claim 16 wherein the ester is a simple C_1-C_4-ester or a triglyceride.

18. A process according to claim 16 wherein the interesterification catalyst is a sodium alkoxide of a C_1-C_4-alcohol.

19. A process according to claim 16 wherein the reaction mixture is heated from about 80°C to about 140°C at a pressure of about 133 Pa to about 6650 Pa.

20. A process according to claim 16 wherein interestification is carried out with a stoichiometric amount to an excess of the ester of the n-3 PUFA.